

ABSTRACT OF THE DISCLOSURE

A switching device operates for selectively connecting either a low-voltage power supply or a high-voltage power supply to a power amplifier. A signal voltage is generated in response to a voltage outputted
5 from the power amplifier. A reference-voltage generation circuit operates for generating a positive-circuit-side reference voltage and a negative-circuit-side reference voltage. A control circuit operates for comparing the signal voltage with the reference voltages and controlling the switching device in response to the results of the comparison. The
10 reference-voltage generation circuit includes a first voltage regulating circuit connected between a positive side of the low-voltage power supply and a first circuit point subjected to a negative potential for generating the positive-circuit-side reference voltage, and a second voltage regulating circuit connected between a negative side of the low-voltage power supply
15 and a second circuit point subjected to a positive potential for generating the negative-circuit-side reference voltage.